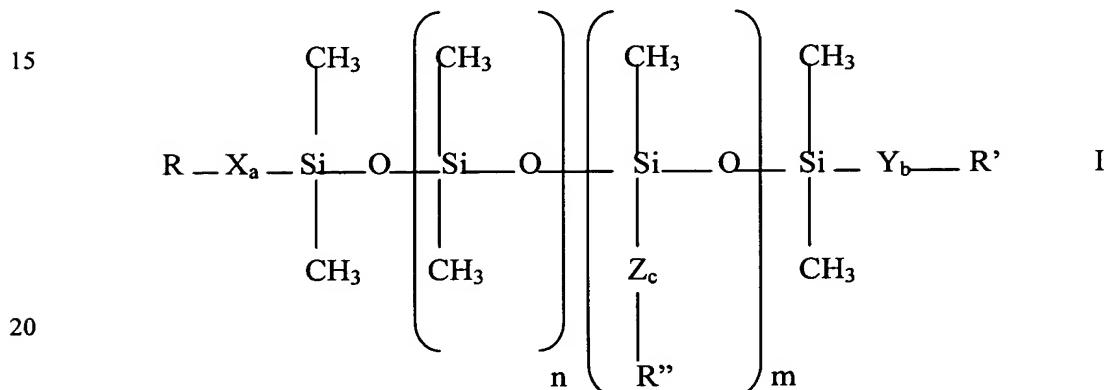


Claims:

1. A composition for improving the properties of a cementitious composition, comprising a fluid blend of
 - 5 (i) at least one polyalkylene oxide, the alkylene oxide units being ethylene and propylene oxides;
 - (ii) at least one aqueous paraffin emulsion; and
 - (iii) at least one siloxane compound that is at least one of liquid and soluble in at least one of water and aqueous alkali.
- 10 2. A composition according to claim 1, in which the siloxane is selected from those that correspond to the general formula I:



where m and n are independently from 1-2000, preferably from 1-500 and more preferably from 1-200, a, b, and c are independently either 0 or 1 and X, Y and Z are selected from

25

- O-;
- O-(CH₂)₁₋₃₀-, this moiety being at least one of linear, branched and containing at least one ring;
- 30 -(CH₂)₁₋₃₀-, this moiety being at least one of linear, branched and containing at least one ring;
- CH₂-CH₂-CH₂-O-;

-CH₂-CH₂-CH₂-O-CH₂-CHOH-CH₂-;
-CH₂-CH₂-CH₂-O-CH₂-CHOH-CH₂-O-;
-CH₂-CH₂-CH₂-O-CH₂-CHOH-CH₂-N-;

5 and R, R' and R'' are independently selected from at least one of hydrogen, C₁₋₁₀₀ alkyl, C₆₋₃₀ aryl, C₇₋₃₀ aralkyl; C₇₋₃₀ alkaryl; C₁₋₃₀ hydroxyalkyl; C₃₋₂₀₀ polyhydroxyalkyl; polyether consisting of from 2-200 identical or different C₁₋₁₅ oxyalkylene units; C₁₋₃₀ aminoalkyl; polyiminopolyalkylene having from 1-20 identical or different C₂₋₁₅ alkylene units; polyiminopolyoxyalkylene having from 1-10 identical or different C₂₋₁₅ oxyalkylene units; C₃₋₃₀ quaternary ammonium, optionally completely or partially ionised with at least one anion; C₄₋₃₀ betaine; carboxyl, optionally completely or partially ionised with any suitable cation; C₄₋₃₀ polycarboxyalkyl, optionally completely or partially ionised with at least one cation; sulpho group, optionally completely or partially ionised with at least one cation; 15 thiosulpho group, optionally completely or partially ionised with at least one cation; epoxide group; glycidyl; acrylate; C₁₋₃₀ ester; polyester consisting of from 2-200 C₂₋₁₅ diacid and diester monomer units; and esters of inorganic acids, all alkyl chains being at least one of linear, branched and comprising at least one ring.

20 3. A composition according to claim 1 or claim 2, in which the siloxane is selected from those of Formula I in which a, b, and c are all 1 and X, Y and Z are selected from

-O-(CH₂)₁₋₃₀-, this moiety being linear or branched;
25 -(CH₂)₁₋₃₀-, this moiety being linear or branched;
-CH₂-CH₂-CH₂-O-CH₂-CHOH-CH₂-;

and R, R' and R'' are independently selected from at least one of hydrogen; hydroxy; polyether consisting of from 2-200 identical or different C₂₋₆ oxyalkylene units, with the proviso that, if there is present more than one type of oxyalkylene unit, there shall be present at least two of each unit; C₃₋₃₀ quaternary ammonium, optionally completely or partially ionised with at least one anion; C₄₋₃₀ betaine; 30

carboxyl, optionally completely or partially ionised with at least one cation; sulpho group, optionally completely or partially ionised with at least one cation; thiosulpho group, optionally completely or partially ionised with at least one cation; glycidyl; and acrylate; all alkyl chains being at least one of linear, branched and comprising at least one ring.

5

4. A composition according to any one of claims 1-3, in which the siloxane is selected from those of Formula I in which m and n are independently selected from 1-200, a, b, and c are all 1 and X, Y and Z are selected from

10

-O-(CH₂)₁₋₁₂-;

-(CH₂)₁₋₁₂-;

-CH₂-CH₂-CH₂-O-CH₂-CHOH-CH₂-;

15

and R, R' and R'' are independently selected from at least one of hydrogen; hydroxy; polyether consisting of from 2-200 identical or different C₂₋₆ oxyalkylene units, with the proviso that, if there is present more than one type of oxyalkylene unit, there shall be present at least two of each unit; C₃₋₃₀ quaternary ammonium, optionally completely or partially ionised with at least one anion; C₄₋₃₀ betaine; carboxyl, optionally completely or partially ionised with at least one cation; glycidyl; and acrylate; all alkyl chains being capable of being linear or branched.

20

5. A composition according to any one of claims 1-4, in which the siloxane is selected from those of Formula I in which m is from 1-30 and n is from 1-100, a, b, and c are all 1 and X, Y and Z are selected from

25

-O-(CH₂)₁₋₆-;

-(CH₂)₁₋₆-;

-CH₂-CH₂-CH₂-O-CH₂-CHOH-CH₂-;

30

and R, R' and R'' are independently selected from at least one of hydrogen; hydroxy; polyether consisting of from 2-200 identical or different C₂₋₆ oxyalkylene

units, with the proviso that, if there is present more than one type of oxyalkylene unit, there shall be present at least two of each unit; C₃₋₂₀ quaternary ammonium, optionally completely or partially ionised with at least one anion; C₄₋₁₀ betaine and carboxyl, optionally completely or partially ionised with at least one cation; all alkyl chains being capable of being linear or branched.

- 5 6. A composition according to any one of claims 1-5 in which the polyalkylene oxide is polyethylene oxide.
- 10 7. A composition according to any one of claims 1-6 in which the weight-average molecular weight of the polyalkylene oxide is 100,000-8,000,000, preferably 2,000,000-5,000,000.
- 15 8. A composition according to any one of claims 1-7 in which the paraffin emulsion is an ionically-emulsified paraffin mixture with a fusion point of 45-51°C and a particle size of less than 2μM.
- 20 9. A method of modifying the properties of a cementitious composition, comprising adding to a fluid cementitious mix a composition according to any one of claims 1-8.
10. A cementitious mix having improved properties, which composition comprises a chemical composition according to claims 1-8.